



# California Regional Water Quality Control Board San Diego Region



Arnold  
Schwarzenegger  
Governor

Linda S. Adams  
Secretary for  
Environmental  
Protection

Over 50 Years Serving San Diego, Orange, and Riverside Counties  
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340  
(858) 467-2952 • Fax (858) 571-6972  
[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)

**Certified Mail No.**  
7010 1060 0000 4952 7112

December 1, 2010

In reply refer to: 753776:mporter

Ms. Kelley Hudson-Macisaac  
Palomar Community College District  
1140 W. Mission Road  
San Marcos, CA 92069

WDID No.	9000002091
CIWQS	
Party No.	521012
Person No.	523164
Place No.	753776
Reg. Measure. No.	374576

Dear Miss Hudson-Macisaac:

**SUBJECT: Action on Request for Clean Water Act Section 401 Water  
Quality Certification for the North Education Center Water  
Quality Certification No. 10C-045**

Enclosed find Clean Water Act Section 401 Water Quality Certification (Certification) with acknowledgment of enrollment under State Water Resources Control Board Order No. 2003-017-DWQ for Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have received State Water Quality Certification for the North Education Center project. A description of the project and project location can be found in the project information sheet, project location map, and project site maps, by the Regional Board, which are included as Attachments 1 through 6.

Any petition for reconsideration of this Certification must be filed with the State Water Resources Control Board within 30 days of certification action (23 CCR § 3867). If no petition is received, it will be assumed that you have accepted and will comply with all the conditions of this Certification.

Failure to comply with all conditions of this Certification may subject you to enforcement actions by the California Regional Water Quality Control Board, San Diego Region, including administrative enforcement orders requiring you to cease and desist from violations, or to clean up waste and abate existing or threatened conditions of pollution or nuisance; administrative civil liability in amounts of up to \$10,000 per day per violation; referral to the State Attorney General for injunctive relief; and, referral to the District Attorney for criminal prosecution.

***California Environmental Protection Agency***

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

OPEN \ \ \ \ \

December 1, 2010

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions regarding this notification, please contact Mike Porter directly at (858) 467-2726 or by email via [mporter@waterboards.ca.gov](mailto:mporter@waterboards.ca.gov).

Respectfully,



David W. Gibson  
Executive Officer

Enclosure:

Clean Water Act Section 401 Water Quality Certification No. 10C-045 for the North Education Center project, with 6 attachments

cc: Refer to Attachment 2 of Certification 10C-045 for Distribution List.



# California Regional Water Quality Control Board San Diego Region



Linda S. Adams  
Acting Secretary for  
Environmental  
Protection

Over 50 Years Serving San Diego, Orange, and Riverside Counties  
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Arnold  
Schwarzenegger  
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340  
(858) 467-2952 • Fax (858) 571-6972  
[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)

## Action on Request for Clean Water Act section 401 Water Quality Certification and Waste Discharge Requirements for the Discharge of Dredged and/or Fill Materials

**PROJECT:** North Education Center  
Certification No. 10C-045

**APPLICANT:** Kelley Hudson-Maclsaac  
Palomar Community College District  
1140 W. Mission Road  
San Marcos, CA 92069

WDID No.	9000002091
CIWQS	
Party No.	521012
Person No.	523164
Place No.	753776
Reg. Measure. No.	374576

**ACTION:**

- |   |   |
|---|---|
| <input type="checkbox"/> Order for Low Impact Certification                         | <input type="checkbox"/> Order for Denial of Certification                          |
| <input checked="" type="checkbox"/> Order for Technically-conditioned Certification | <input type="checkbox"/> Waiver of Waste Discharge Requirements                     |
| <input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ       | <input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017 DWQ |

**PROJECT DESCRIPTION:**

The proposed project is the construction of the North Education Center (a community college) and Horse Ranch Creek Road in two phases. Phase one will be the construction of Horse Ranch Creek Road and approximately one-half of the campus. Phase two will complete construction of the campus. Horse Ranch Creek Road would serve as the main access to the Palomar College site. The road would be constructed offsite, adjacent to the eastern boundary of the Project site from the existing northern segment of Pankey Road to the north to SR 76/ Pala Road to the south. The construction of Horse Ranch Creek Road would implement construction for roadway SC2602 of the County's General Plan Circulation Element. The Water Quality Certification is for both phases.

*California Environmental Protection Agency*

**STANDARD CONDITIONS:**

The following three standard conditions apply to all certification actions, except as noted under Condition 3 for denials (Action 3).

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).
2. This certification action is not intended and must not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license *unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.*
3. The validity of any non-denial certification action (Actions 1 and 2) must be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

**ADDITIONAL CONDITIONS:**

In addition to the three standard conditions, Palomar Community College District must satisfy the following:

**A. GENERAL CONDITIONS**

1. Palomar Community College District must, at all times, fully comply with the engineering plans, specifications and technical reports submitted with this application for 401 Water Quality Certification and all subsequent submittals required as part of this certification.
2. Palomar Community College District must enroll in and comply with the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.
3. Palomar Community College District must maintain a copy of this certification, the application, and supporting documentation at the project site at all times for review by site personnel and agencies.

4. Palomar Community College District must notify the Regional Water Quality Control Board San Diego Region (San Diego Water Board), in writing, **5 days** prior to commencement of construction.
5. Prior to the start of the project and annually thereafter, Palomar Community College District must educate all personnel on the requirements in this certification, pollution prevention measures, and spill response.
6. Palomar Community College District must permit the San Diego Water Board or its authorized representative at all times, upon presentation of credentials:
  - a) Entry onto project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept.
  - b) Access to copy any records required to be kept under the terms and conditions of this certification.
  - c) Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this certification.
  - d) Sampling of any discharge or surface water covered by this Order.
7. Palomar Community College District must notify the San Diego Water Board *within **24 hours** of any unauthorized discharge to waters of the U.S. and/or State*; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional BMPs or other measures that will be implemented to prevent future discharges.
8. Palomar Community College District must, at all times, maintain appropriate types and sufficient quantities of materials onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reached a waters of the U.S. and/or State.
9. This Certification is not transferable in its entirety or in part to any person except after notice to the Executive Officer of the San Diego Water Board in accordance with the following terms.
  - a. **Transfer of Property Ownership:** Palomar Community College District must notify the San Diego Water Board of any change in ownership of the project area. Notification of change in ownership must include, but not be limited to, a statement that Palomar Community College District has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the Executive officer of the San Diego Water Board within **10 days** of the transfer of ownership.

- b. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in Palomar College North Draft Wetland Restoration Plan (Prepared by Helix Environmental, January 19, 2010), and the Preliminary Conceptual Wetlands Mitigation Plan for the Palomar College North Educational Center (prepared by DUDEK, April 2010) shall include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board within **10 days** of the transfer date.
  - c. **Transfer of Post-Construction BMP Maintenance Responsibility:** Palomar Community College District assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred, Palomar Community College District must submit to the San Diego Water Board a copy of such documentation within **10 days** and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications.
10. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation may be subject to any remedies, penalties, process or sanctions as provided for under state and federal law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.
  11. In response to a suspected violation of any condition of this certification, the San Diego Water Board may require the holder of any permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the San Diego Water Board deems appropriate, provided that the burden, including costs, of the reports must be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
  12. In response to any violation of the conditions of this certification, the San Diego Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

## B. POST CONSTRUCTION STORM WATER MANAGEMENT

1. All of the elements of the Storm Water Management Plan (SWMP) Palomar College North Education Center, last revised August 27, 2007 and prepared by RBF Consulting and the Water Quality Addendum to the Palomar College SWMP, last revised January 2010 and prepared by RBF Consulting in support of the application must be implemented and maintained by Palomar Community College District, or successive owners of the North Education Center development.
2. The structural BMPs must be sized to comply with the following numeric sizing criteria:

### a) Volume

Volume-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

- i. The volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event, as determined from the local historical rainfall record (0.6 inch approximate average for the San Diego County area); or
- ii. The volume of runoff produced by the 85<sup>th</sup> percentile 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or
- iii. The volume of annual runoff based on unit basin storage volume, to achieve 90% or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/Commercial, (1993); or
- iv. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85<sup>th</sup> percentile 24-hour runoff event; or

### b) Flow

Flow-based BMPs must be designed to mitigate (infiltrate, filter, or treat) either:

- i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or
- ii. The maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
- iii. The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of

the 85<sup>th</sup> percentile hourly rainfall intensity multiplied by a factor of two.

3. All storm drain inlet structures within the project boundaries must be stamped and/or stenciled with appropriate language prohibiting non-storm water discharges.
4. Post-construction BMPs must be installed and functional prior to occupancy and/or planned use of development areas.
5. Palomar Community College District, their designated party, or other parties that assume future transferred liability under this Certification, must inspect and maintain post-construction structural BMPs per the manufacturers' specifications and/or engineering design specifications. An inspection and maintenance log must be maintained for review by germane agencies. Copies of the inspection and maintenance log must be provided to the San Diego Water Board upon request.
6. **Before occupancy**, Palomar Community College District, their designated party or the successor owners of the North Education Center development, must submit a letter to the San Diego Water Board and the County of San Diego describing where the post-construction inspection and maintenance log will be kept. Failure to maintain a post-construction inspection and maintenance log will be a violation of this Certification.
7. Post-construction BMPs must include, but not be limited to:
  - a) Design BMPs:
    - 1) Minimizing impervious areas.
    - 2) Conserving natural areas.
    - 3) Minimizing directly connected impervious areas.
    - 4) Protecting slopes and channels with stabilization and drop structures where necessary.
    - 5) Planting deep-rooted, drought tolerant plant species on all graded slopes and natural areas for erosion control.
  - b) Source Control BMPs:
    - 1) Storm drain stenciling and tiling.
    - 2) Covered trash enclosures.
    - 3) Efficient irrigation design.
    - 4) Riprap apron energy dissipators

c) Treatment Control BMPs:

- 1) Vegetated swale alongside the Western Site Boundary.
  - 2) Extended dry detention basin at ultimate discharge points.
  - 3) A swirl concentrator at the outfall of the storm drain system, just upstream of the extended detention basin.
8. The extended detention basin must be designed and constructed in accordance with the most recent California Stormwater Quality Association guidance for extended detention basins. The basin outlets must be placed to maximize the flowpath through the facility. The ratio of flowpath length to width from the inlet to the outlet must be at least 1.5:1. The flowpath length is defined as the mean width of the basin. Palomar Community College District must maintain the extended detention basin in accordance with the most recent California Stormwater Quality Association guidance for extended detention basins.

**C. MITIGATION**

1. Proposed permanent impacts to Waters of the U.S and/or State may not exceed 1.55-acres. Proposed impacts to vegetation communities and waters include and may not exceed:
  - a) Alkali meadows 0.33-acre.
  - b) Freshwater marsh 0.25-acre.
  - c) Southern cottonwood – willow riparian forest 0.60-acre.
  - d) Southern willow scrub 0.35-acre
  - e) Streambed 0.02-acre.
2. Compensatory mitigation must be achieved by:
  - a) On-site mitigation resulting in the combined establishment and enhancement of 4.16 acres of waters of the U.S. and State, as follows:
    - 1 – Establishment of 0.76 acre of Alkali meadow.
    - 2 - Enhancement (3.40 acres) of 1.96 acres Alkali meadow, 0.78 acre Southern cottonwood-willow riparian forest, 0.52 acre of disturbed Coyote bush scrub, and 0.14 acre of non-native grassland/pasture.
  - b) Off-site mitigation (Fenton Ranch) resulting in the combined establishment and enhancement of 3.97 acres of waters of the U.S. and State, as follows:
    - 1 - Establishment (0.95 acre) of 0.60 acre of Southern cottonwood-willow riparian forest and 0.35 acre of Southern willow scrub.

2 - Enhancement (3.02 acres) of 1.62 acres of Southern cottonwood-willow riparian forest and 1.40 acres of Southern willow scrub.

3. The proposed mitigation, monitoring and maintenance must be implemented as described in the Palomar College North Draft Wetland Restoration Plan (Prepared by Helix Environmental, January 19, 2010), and the Preliminary Conceptual Wetlands Mitigation Plan for the Palomar College North Educational Center (prepared by DUDEK, April 2010).
4. Within **90 days** of initiating any impacts to Waters of the State or U.S., Palomar Community College District must provide the San Diego Water Board a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. Within **one year** of the start of construction, the Palomar Community College District must submit proof of a completed preservation mechanism that will protect all mitigation areas and their buffers in perpetuity. Construction of the site must not be initiated until a completed preservation mechanism is received. The conservation easement, deed restriction, or other legal limitation on the mitigation property must be adequate to demonstrate that the site will be maintained without future development or encroachment on the site which could otherwise reduce the functions and values of the site for the variety of beneficial uses of waters of the U.S. that it supports. The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland and streambed functions and values of the site. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.
5. Palomar Community College District must submit a report (including topographic maps and planting locations) to the San Diego Water Board within **90 days** of completion of mitigation site preparation and planting, describing as-built status of the mitigation project. If the site grading and planting are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions.
6. The construction of proposed mitigation must be completed within the same calendar year as impacts occur, or at least no later than 9 months following the close of the calendar year in which impacts first occur (e.g., if impacts occur in June 2003, construction of mitigation for all impacts must be completed no later than September 2004). Delays in implementing mitigation will result in an increased mitigation ratio by 1.0 acre for each acre of impact for each year, or part thereof, of delay.

7. Mitigation areas must be maintained free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 5 percent of the onsite or offsite mitigation areas.
8. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, Palomar Community College District, will be responsible for repair and replanting of the damaged area(s).
9. Mitigation monitoring reports must be submitted **annually** until mitigation has been deemed successful. Monitoring reports must be submitted no later than **30 days** following the end of the monitoring period. Monitoring reports must include, but not be limited to, the following:
  - a) Names, qualifications, and affiliations of the persons contributing to the report;
  - b) Tables presenting the raw data collected in the field as well as analyses of the physical and biological data;
  - c) Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;
  - d) Photodocumentation from established reference points;
  - e) Survey report documenting boundaries of mitigation area; and
  - f) Other items specified in the Palomar College North Draft Wetland Restoration Plan (Prepared by Helix Environmental, January 19, 2010), and the Preliminary Conceptual Wetlands Mitigation Plan for the Palomar College North Educational Center (prepared by DUDEK, April 2010).

10. For purposes of this Certification, establishment is defined as the creation of vegetated or unvegetated waters of the U.S./State where the resource has never previously existed (e.g. conversion of nonnative grassland to a freshwater marsh). Restoration is divided into two activities, re-establishment and rehabilitation. Re-establishment is defined as the return of natural/historic functions to a site where vegetated or unvegetated waters of the U.S./State previously existed (e.g., removal of fill material to restore a drainage). Rehabilitation is defined as the improvement of the general suite of functions of degraded vegetated or unvegetated waters of the U.S./State (e.g., removal of a heavy infestation or monoculture of exotic plant species from jurisdictional areas and replacing with native species). Enhancement is defined as the improvement to one or two functions of existing vegetated or unvegetated waters of the U.S./State (e.g., removal of small patches of exotic plant species from an area containing predominantly natural plant species). Preservation is defined as the acquisition and legal protection from future impacts in perpetuity of existing vegetated or unvegetated waters of the U.S./State (e.g., conservation easement).
11. For the purpose of determining mitigation credit for the removal of exotic/invasive plant species, only the actual area occupied by exotic/invasive plant species must be quantified to comply with mitigation requirement.

#### **D. STREAM PHOTO DOCUMENTATION PROCEDURE**

The Applicant must conduct photo documentation of the project site and mitigation areas, including all areas of permanent and temporary impact, prior to and after project construction. Photo documentation must be conducted in accordance with the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure, included as Attachment 6. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced. The Applicant must submit this information in a photo documentation report to the San Diego Water Board **with the Mitigation Maintenance and Monitoring reports** (Condition C.9.). The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

#### **E. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES PHOTO DOCUMENTATION PROCEDURE**

The Applicant must conduct photo documentation of implemented post-construction BMPs. Photo-documentation must be modeled after the State Water Resources Control Board Standard Operating Procedure 4.2.1.4: Stream Photo Documentation Procedure, included as Attachment 6. In addition, photo documentation must include Global Positioning System (GPS) coordinates for

each of the photo points referenced. The Applicant must submit this information in a photo documentation report to the San Diego Water Board within **90 days** of project completion. The report must include a compact disc that contains digital files of all the photos (jpeg file type or similar).

#### **F. GEOGRAPHIC INFORMATION SYSTEM REPORTING**

The Applicant must submit Geographic Information System (GIS) shape files of the impact and mitigation areas within **30 days** of mitigation installation. All impact and mitigation areas shapefiles must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

#### **G. REPORTING**

1. All information requested in this Certification is pursuant to California Water Code (CWC) section 13267. Civil liability may be administratively imposed by the San Diego Water Board for failure to furnish requested information pursuant to CWC section 13268.
2. All reports and information submitted to the San Diego Water Board must be submitted in both hardcopy and electronic format. The preferred electronic format for each report submission is one file in PDF format that is also Optical Character Recognition (OCR) capable.
3. Palomar Community College District must submit a final as-built report to the San Diego Water Board within **90 days** of project completion for each phase. The report should include as-built drawings no bigger than 11" x 17" and photos of the completed project.
4. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:
  - a. For a corporation, by a responsible corporate officer of at least the level of vice president.
  - b. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
  - c. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
5. A duly authorized representative of a person designated in Items 4.a. through 4.c. above may sign documents if:

- a. The authorization is made in writing by a person described in Items 4.a. through 4.c. above.
  - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
  - c. The written authorization is submitted to the San Diego Water Board Executive Officer.
6. All applications, reports, or information submitted to the San Diego Water Board must be signed and certified as follows:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

7. Palomar Community College District must submit reports required under this Certification, or other information required by the San Diego Water Board, to:

Executive Officer  
 California Regional Water Quality Control Board  
 San Diego Region  
 Attn: 401 Certification No. 10C-045  
 9174 Sky Park Court, Suite 100  
 San Diego, California 92123

8. Required Reports: The following list summarizes the reports required per the conditions of this Certification to be submitted to the San Diego Water Board.

Report Topic	Certification Condition	Due Date(s)
Project commencement	A.4. Notify of project commencement 5 days prior to start of project.	5 Days prior to start of project.
Unauthorized Discharge	A.7. Report any unauthorized discharge to waters within 24 hours.	Within 24 hours of discharge.
Transfer of Responsibility	A.9. Report transfer of responsibility within 10 days.	Within 10 days of transfer.
BMP maintenance log	B.6. Notify of location of BMP maintenance log.	Before occupancy.
Mitigation Preservation Mechanism	C.4. Provide draft mitigation preservation	Within 90 days after start of project.

	mechanism within 90 days.	
Mitigation Preservation Mechanism	C.4. Submit proof of a final, completed preservation mechanism.	Within one year after start of project.
Mitigation As-built	C.5. Provide mitigation as-built report within 90 days of site planting.	Within 90 days
Mitigation Reports	C.9. Provide annual mitigation monitoring reports.	Annually and within 30 days of end of monitoring period.
Photo Documentation	D. Submit photo documentation of pre- and post-impact areas.	Submit with Mitigation Reports (Condition C.9.)
Post-Construction BMPs Photo Documentation	E. Provide Post-Construction BMPs Photo Documentation within 90 days of installation of BMPs.	Within 90 days of project completion.
GIS Reporting	F. Provide GIS shape files of impacts and mitigations areas within 90 days of impacts and completion of mitigation.	Within 30 days from mitigation installation.
As-built Reporting	G.3. Provide as-built report.	Within 90 days of completion of each phase of work.

**PUBLIC NOTIFICATION OF PROJECT APPLICATION:**

On June 23, 2010 receipt of the project application was posted on the San Diego Water Board web site to serve as appropriate notification to the public. No comments were received.

**REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:**

Mike Porter  
 California Regional Water Quality Control Board, San Diego Region  
 9174 Sky Park Court, Suite 100  
 San Diego, CA 92123  
 858-467-2726  
 mporter@waterboards.ca.gov

**WATER QUALITY CERTIFICATION:**

I hereby certify that the proposed discharge from the **North Education Center** project (Certification No. 10C-045) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water board Order No. 2003-017-DWQ, "Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)," which requires compliance with all conditions of this Water Quality Certification. Please note enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).

  
\_\_\_\_\_  
David W. Gibson  
Executive Officer  
Regional Water Quality Control Board

12-1-2016  
Date

- Attachments:
1. Project Information
  2. Distribution List
  3. Location Maps
  4. Site Maps
  5. Mitigation Maps
  6. Photodocumentation

**ATTACHMENT 1  
PROJECT INFORMATION**

Applicant: Ms. Kelley Hudson-Macisaac  
Palomar Community College District  
1140 W. Mission Road  
San Marcos, CA 92069  
Telephone: 619-733-6056

Applicant  
Representatives: Mr. James Whalen  
James Whalen Associates, Inc.  
1660 Hotel Circle N., Suite 725  
San Diego, CA 92108  
Telephone: 619-683-5544  
E-mail: James@jwhalen.net

Project Name: North Education Center

Project Location: The project site is located in Fallbrook, approximately 500 feet east of Interstate 15, 1 mile north of California 76, and 2,000 feet south of Pala Mesa Heights Drive. The center of the project is located approximately at latitude 33°20' 53.4048 north, longitude 117°9'25.203 west. The Assessor's Parcel Numbers are 108-120-55 and 108-121-16.

Type of Project: College Campus Construction

Project Description: The proposed project is the construction of the North Education Center (a community college) and Horse Ranch Creek Road in two phases. Phase one will be the construction of Horse Ranch Creek Road and approximately one-half of the campus. Phase two will complete construction of the campus. Horse Ranch Creek Road would serve as the main access to the Palomar College site. The road would be constructed offsite, adjacent to the eastern boundary of the Project site from the existing northern segment of Pankey Road to the north to SR 76/ Pala Road to the south. The construction of Horse Ranch Creek Road would implement construction for roadway SC2602 of the County's General Plan Circulation Element.

Federal Agency/Permit:	Army Corps of Engineers, Individual Permit – Michelle Mattson
Other Required Regulatory Approvals:	California Department of Fish and Game, Streambed Alteration Agreement – Darren Bradford
California Environmental Quality Act (CEQA) Compliance:	<u>Palomar Community College – North Education Center, Final Environmental Impact Report</u> , June 2008; State Clearing House No. 2007011136. The Final Environmental Impact Report was certified July 8, 2009.
Receiving Water:	Horse Ranch Creek and several unnamed tributaries. San Luis Rey hydrologic unit, Lower San Luis hydrologic area, Bonsall hydrologic subarea (903.12).
Impacted Waters of the United States and/or State:	Proposed permanent impacts to Waters of the U.S and/or State are 1.55-acres. Proposed impacts to vegetation communities and waters include: <ul style="list-style-type: none"><li>▪ Alkali meadows 0.33-acre.</li><li>▪ Freshwater marsh 0.25-acre.</li><li>▪ Southern cottonwood – willow riparian forest 0.60-acre.</li><li>▪ Southern willow scrub 0.35-acre</li><li>▪ Streambed 0.02-acre.</li></ul>
Dredge Volume:	None
Related Projects Implemented/to be Implemented by the Applicant(s):	Palomar Community College District's conceptual Project design includes an area of about 16 acres set aside for future expansion of the campus that is referred to as the Native Area in the approved EIR. The future expansion would occur in the Southern part of the property next to existing avocado groves on land that contains a mixture of non-native and wetland habitats.

Compensatory Mitigation:

Compensatory mitigation is described in the Palomar College North Draft Wetland Restoration Plan prepared by Helix Environmental, January 19, 2010, and the Preliminary Conceptual Wetlands Mitigation Plan for the Palomar College North Educational Center prepared by DUDEK, April 2010.

Compensatory mitigation for the proposed impacts will consist of:

On-site mitigation resulting in the combined establishment and enhancement of 4.16 acres of waters of the U.S. and State, as follows:

- Establishment of 0.76 acre of Alkali meadow.
- Enhancement (3.40 acres) of 1.96 acres Alkali meadow, 0.78 acre Southern cottonwood-willow riparian forest, 0.52 acre of disturbed Coyote bush scrub, and 0.14 acre of non-native grassland/pasture.

Off-site mitigation (Fenton Ranch) resulting in the combined creation and enhancement of 3.97 acres of waters of the U.S. and State, as follows:

- Establishment (0.95 acre) of 0.60 acre of Southern cottonwood-willow riparian forest and 0.35 acre of Southern willow scrub.
- Enhancement (3.02 acres) of 1.62 acres of Southern cottonwood-willow riparian forest and 1.40 acres of Southern willow scrub.

The overall compensatory mitigation is 8.13 acres of establishment and enhancement.

Best Management Practice (BMPs):

The Storm Water Management Plan for Palomar College North Education Center, last revised August 27, 2007 and prepared by RBF Consulting and the Water Quality Addendum to the Palomar College SWMP, last revised January 2010 and prepared by RBF Consulting propose the following post-construction BMPs.

- a) On-site Site Design BMPs:
  - 1) Minimizing impervious areas.
  - 2) Conserving natural areas.
  - 3) Minimizing directly connected impervious areas.
  - 4) Protecting slopes and channels with stabilization

and drop structures where necessary.

- 5) Planting deep-rooted, drought tolerant plant species on all graded slopes and natural areas for erosion control

b) On-site Source Control BMPs:

- 1) Storm drain stenciling and tiling.
- 2) Covered trash enclosures.
- 3) Efficient irrigation design.
- 4) Riprap apron energy dissipators

c) On-site Treatment Control BMPs:

- 1) Vegetated swale alongside the Western Site Boundary.
- 2) Extended dry detention basin at ultimate discharge points.
- 3) A swirl concentrator will be installed at the outfall of the storm drain system, just upstream of the extended detention basin.

Public Notice:                      June 23, 2010

Fees:                                      Total Due: \$5,546.00  
    Total Paid: \$640.00 (Check No. 4707)  
    Total Paid: \$4906.00 (Check No. 76204323)

**ATTACHMENT 2  
DISTRIBUTION LIST**

Ms. Michelle Mattson  
U.S. Army Corps of Engineers  
Regulatory Division  
South Coast Branch, San Diego Section  
[Therese.Orourke@usace.army.mil](mailto:Therese.Orourke@usace.army.mil)

Mr. Darren Bradford  
California Department of Fish and Game  
South Coast Region  
Habitat Conservation Planning – North  
[Dbradford@dfg.ca.gov](mailto:Dbradford@dfg.ca.gov)

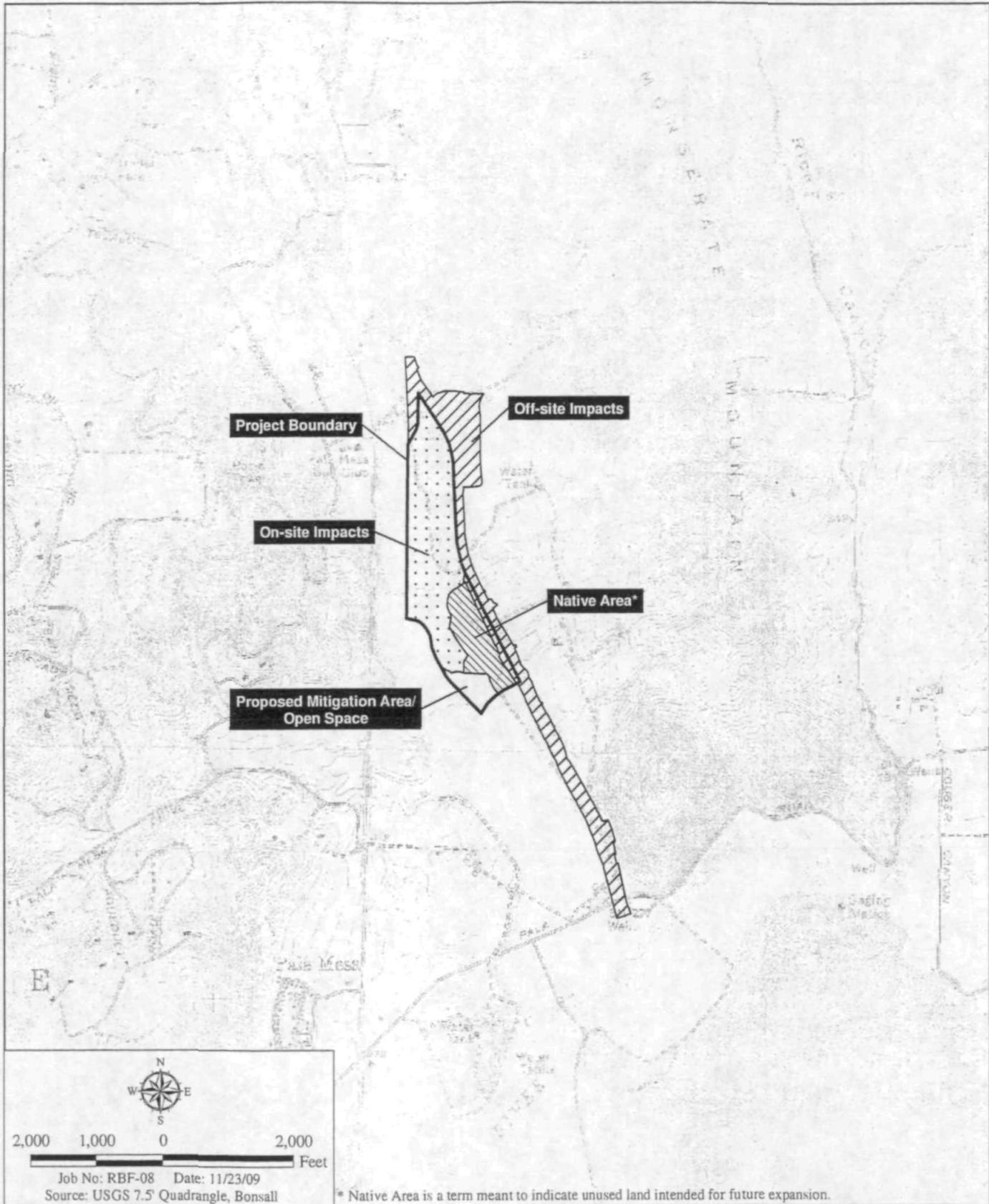
Mr. Eric Raffini  
Wetlands Regulatory Office  
U.S. Environmental Protection Agency, Region IX  
[R9-WTR8-Mailbox@epa.gov](mailto:R9-WTR8-Mailbox@epa.gov)

State Water Resources Control Board  
Division of Water Quality  
401 Water Quality Certification and Wetlands Unit  
[Stateboard401@waterboards.ca.gov](mailto:Stateboard401@waterboards.ca.gov)

U.S. Department of the Interior  
Fish and Wildlife Service  
6010 Hidden Valley Road  
Carlsbad, CA 92011







Job No: RBF-08 Date: 11/23/09  
 Source: USGS 7.5' Quadrangle, Bonsall

\* Native Area is a term meant to indicate unused land intended for future expansion.

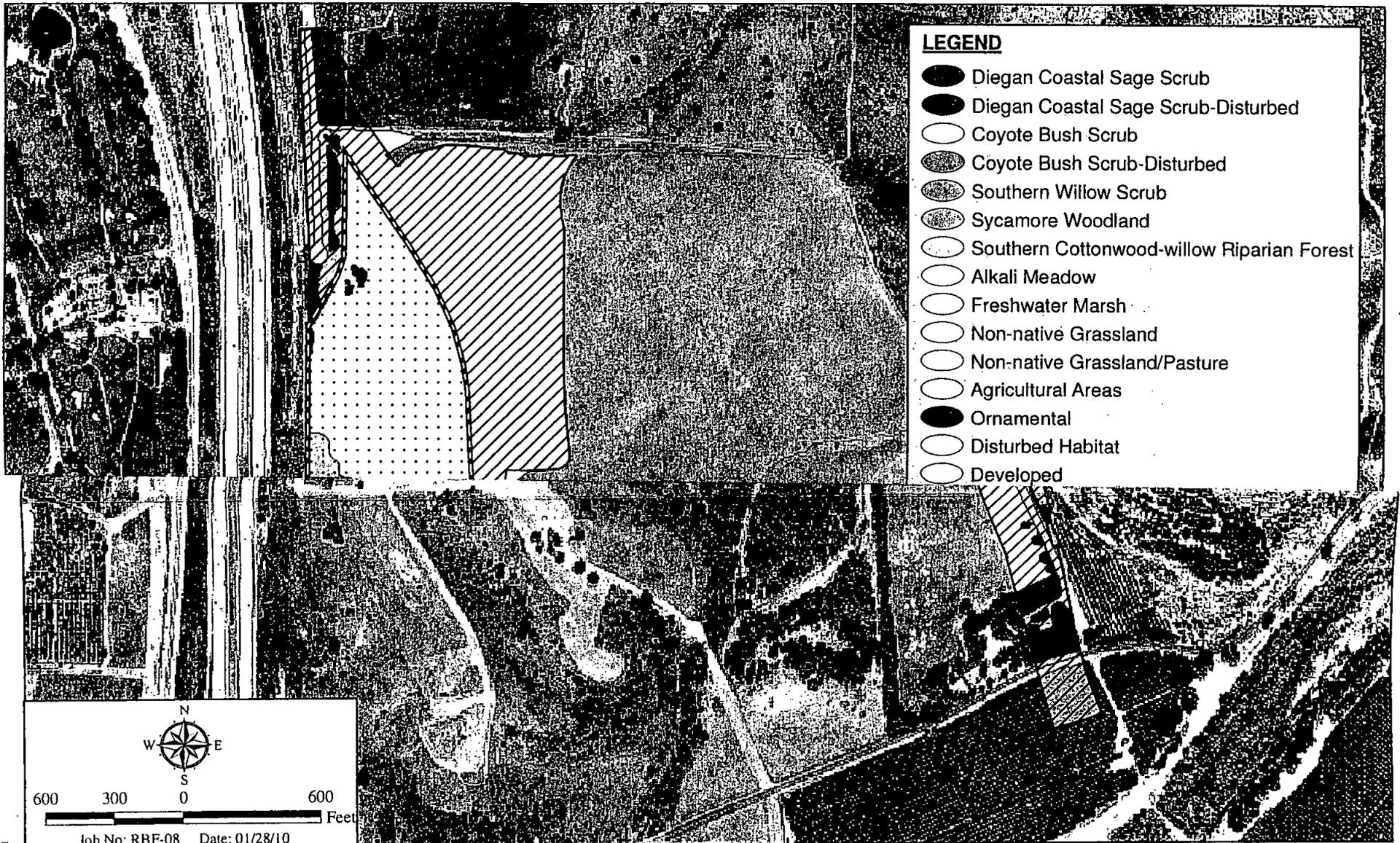
## Project Location Map

PALOMAR COLLEGE NORTH

Amended Certification No. 10C-045

**ATTACHMENT 4**

SITE MAPS



E:\ArcGIS\SR\01-08 Palomar College\Fullbrook\A\Map\B\ORestorationPlan\Fig3\_VegetationImpacts.mxd -NM

## Vegetation Impacts

PALOMAR COLLEGE NORTH

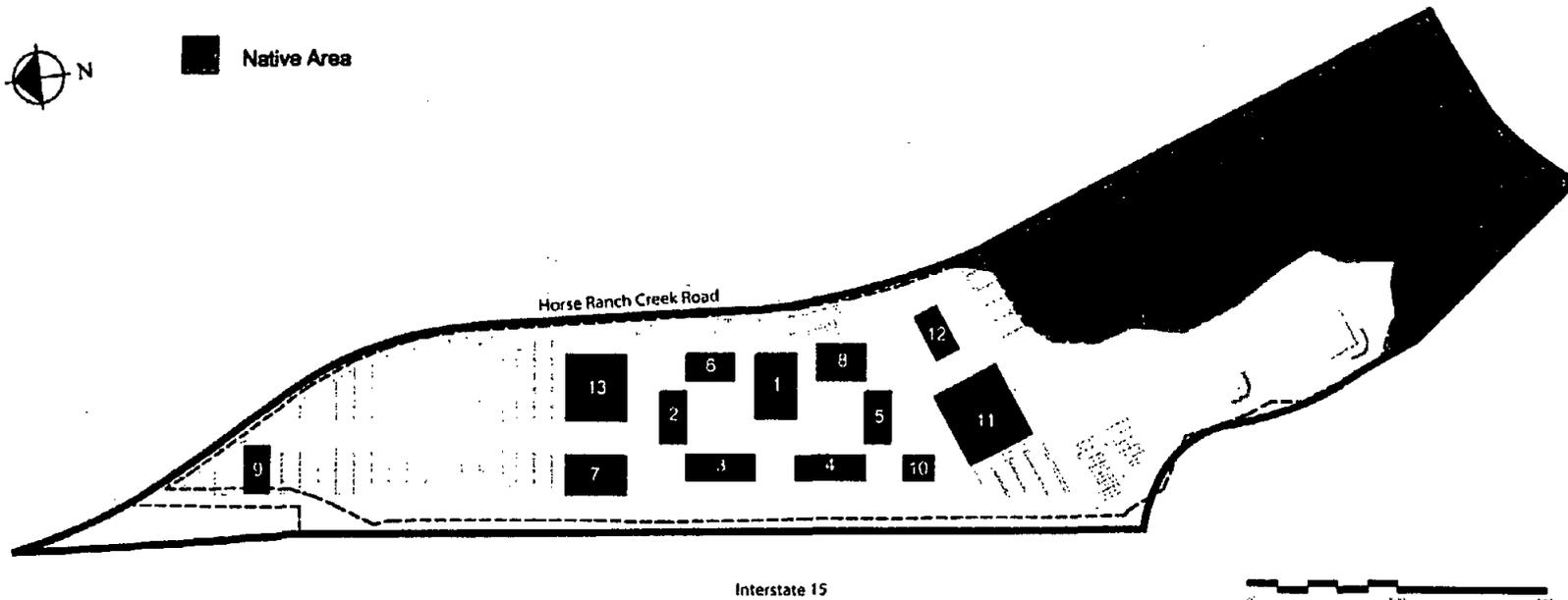
Figure 3

01/28/10

**HELIX**



■ Native Area



### BUILDING KEY

1	LRC / LAC	93,210 sq.ft.	(2 Story)	8	Student Services Center	36,660 sq.ft.	(2 Story)
2	Humanities	28,990 sq.ft.	(2 Story)	9	Central Plant / M&O	13,000 sq.ft.	(1 Story)
3	Science	38,350 sq.ft.	(2 Story)	10	Business Technologies	16,900 sq.ft.	(2 Story)
4	Math	38,350 sq.ft.	(2 Story)	11	P.E. Facilities	60,775 sq.ft.	(1 Story)
5	Health Sciences	27,950 sq.ft.	(2 Story)	12	Child Development Center	13,715 sq.ft.	(1 Story)
6	Administration / Records	26,260 sq.ft.	(2 Story)	13	Performing Arts	26,390 sq.ft.	(1 Story)
7	Vocational Tech	42,510 sq.ft.	(2 Story)				

Source: LPA Architects



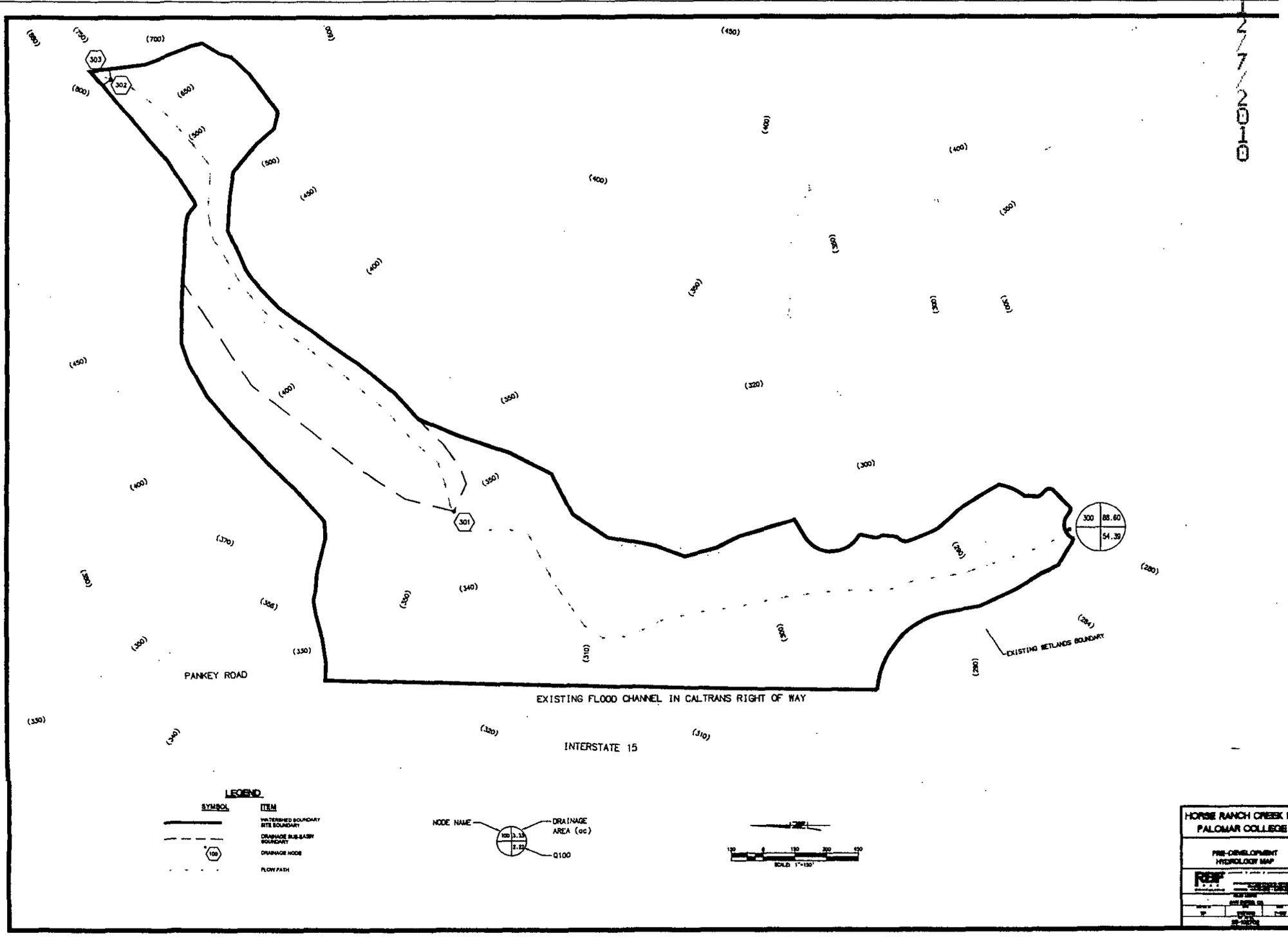
Not to Scale

## Conceptual Site Master Plan

### Palomar Community College - North Education Center EIR

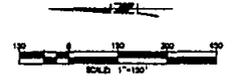
Figure 1-4

272010



**LEGEND**

SYMBOL	ITEM
—	WATERSHED BOUNDARY
—	SITE BOUNDARY
- - -	DRAINAGE SUB-BASIN BOUNDARY
⬡	DRAINAGE NODE
⋯	FLOW PATH



**HORSE RANCH CREEK**  
**PALOMAR COLLEGE**

PRE-DEVELOPMENT  
 HYDROLOGY MAP

**REDF**  
 REGISTERED ENGINEERING FIRM

DATE: 08/10/00  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]

- 150,000 sq ft of classroom and office spaces in three buildings<sup>1</sup>

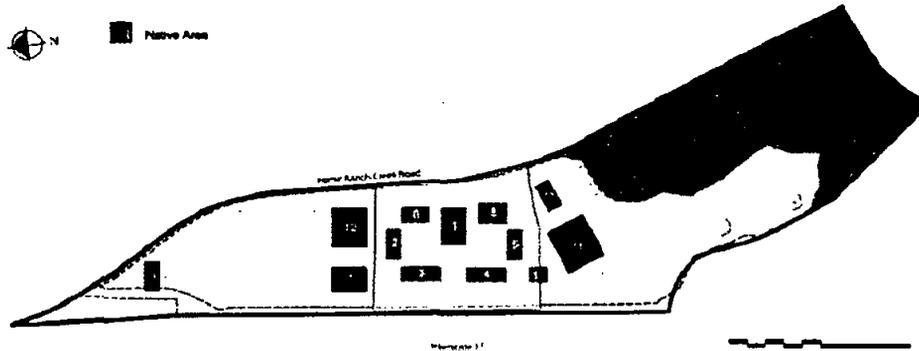


Figure 1-2: Phase I Project Footprint

### 1.3.2. Phase II

Phase II of the campus development plan calls for:

- Precise grading of the Phase II area (yellow highlighted in Figure 1-3)
- Expansion of wet and dry utilities
- Low Impact Development BMPs
- Construction and relocation of parking and walkways
- Classroom and office spaces in ten buildings

Phase II may also incorporate removal of the infiltration basin as a function of future planning, provided that both Phase I and Phase II LID measures provided sufficient peak flow and flow duration reductions to completely offset the removal, and provided that all impervious surfaces receive water quality treatment prior to discharge to the wetland area south of the campus site.

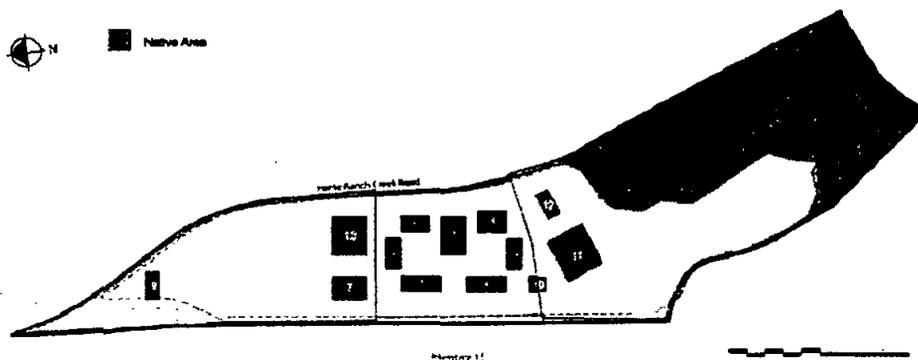


Figure 1-3: Phase II Project Footprint

<sup>1</sup> Not all buildings shown in Figure 1-2 will be constructed in Phase I. Phase I calls for the construction of the three easternmost buildings in the Phase I area. The remaining buildings will be constructed as part of Phase II.



**ATTACHMENT 5**

**Mitigation Maps**



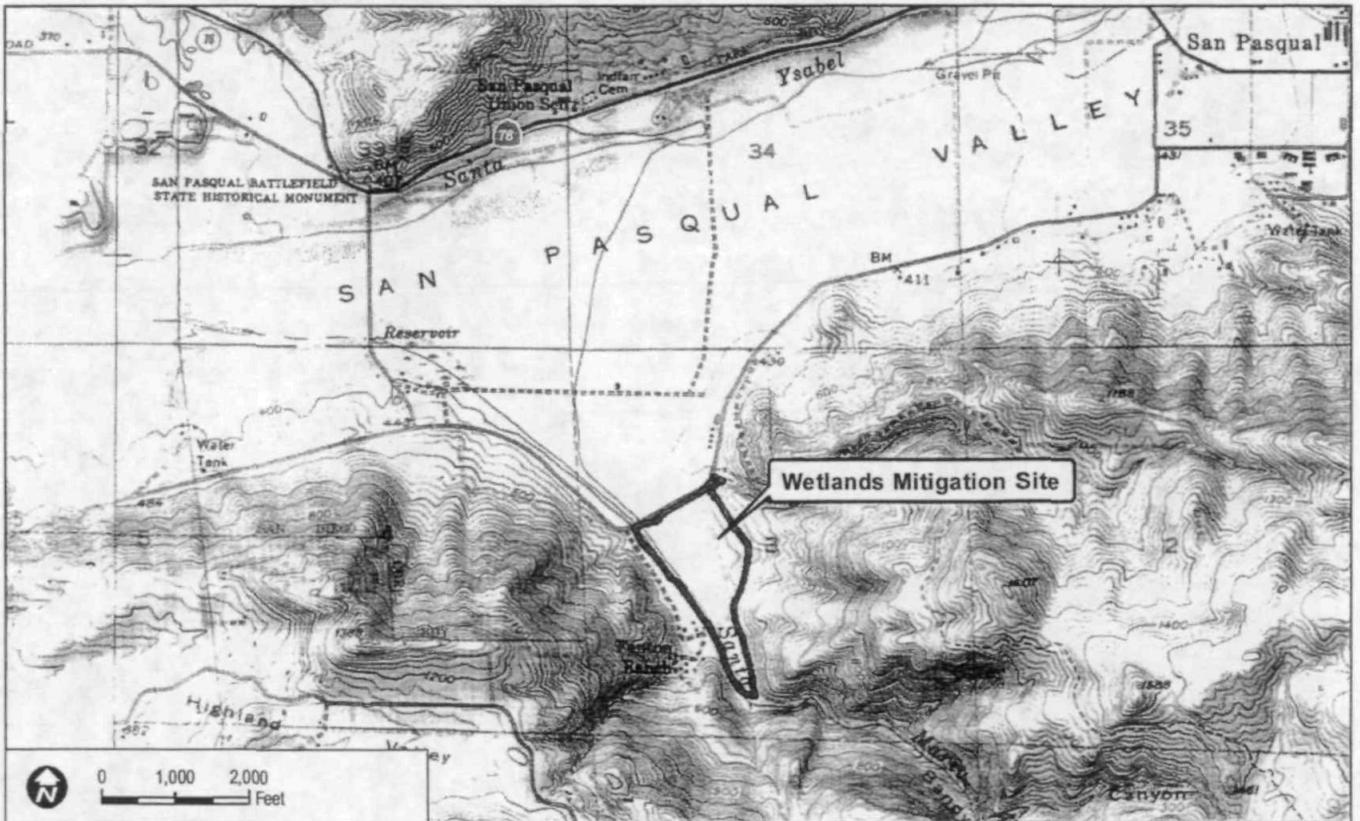
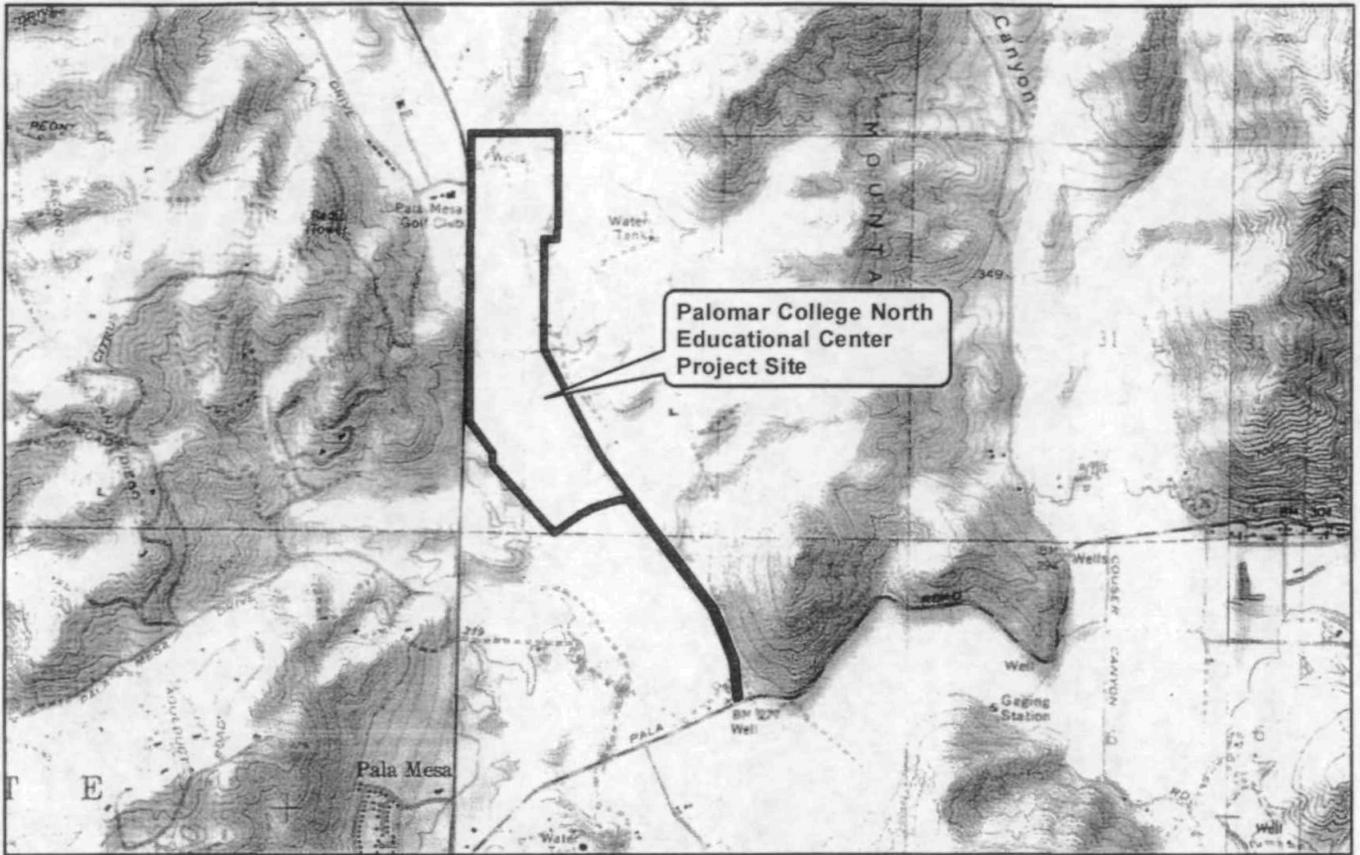
Z:\projects\6589-01\MAPS\DC\MAPS\CWMP\_FY10\COMPRESS\_Engl\_108.mxd

**DUDEK**

6589-01  
APRIL 2010

Palomar College North Educational Center - Preliminary Conceptual Wetlands Mitigation Plan

**FIGURE 1**  
**Regional Map**



Z:\Projects\6589-01\MAP\POC\MAP\SUB\MIP\Fig\COMPRESS\Fig\_2\_w.mxd

**DUDEK**

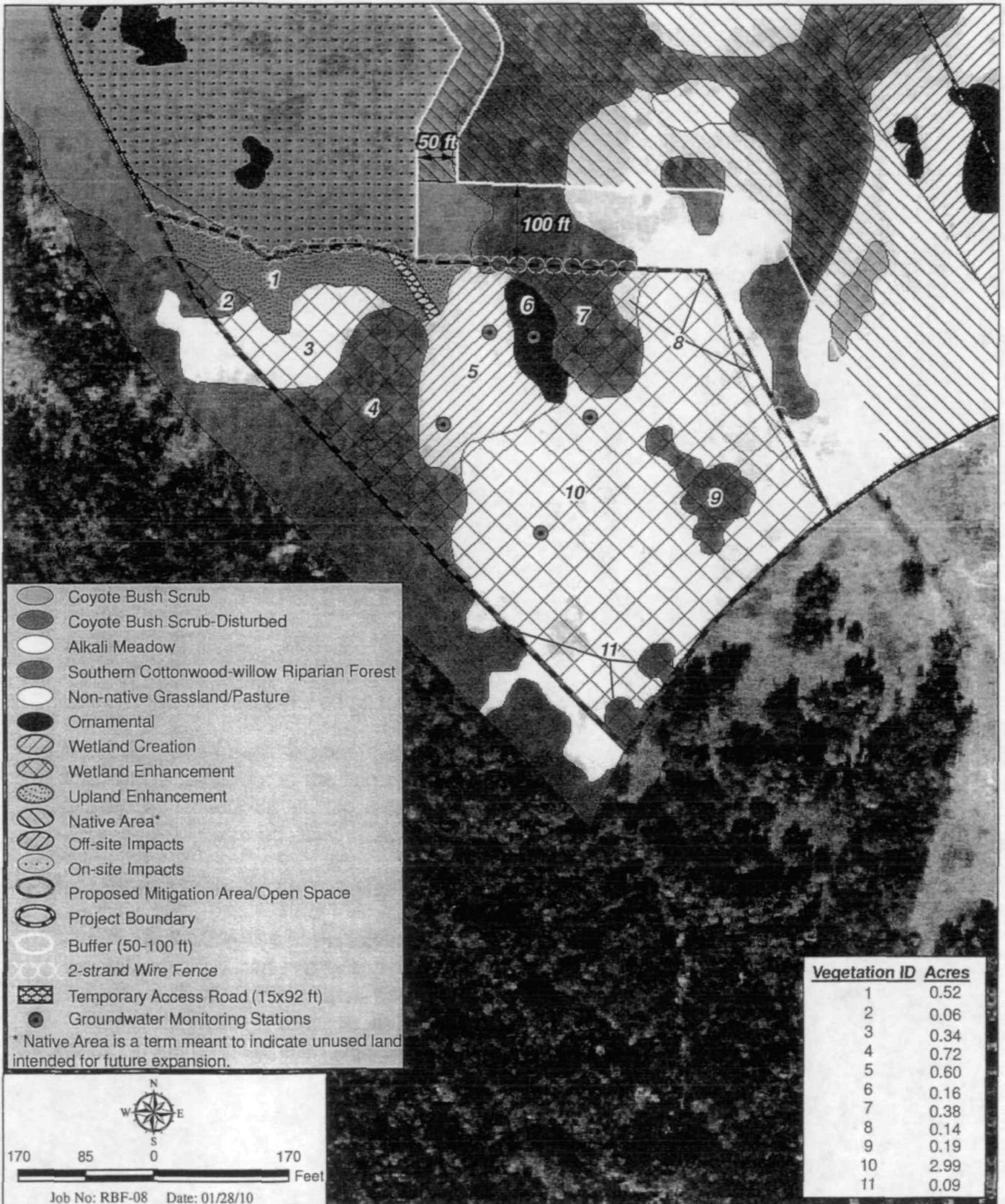
6589-01  
APRIL 2010

SOURCE: USGS 7.5 Minute Series Quadrangle.

Palomar College North Educational Center - Preliminary Conceptual Wetlands Mitigation Plan

**FIGURE 2**  
**Vicinity Map**

CHONN

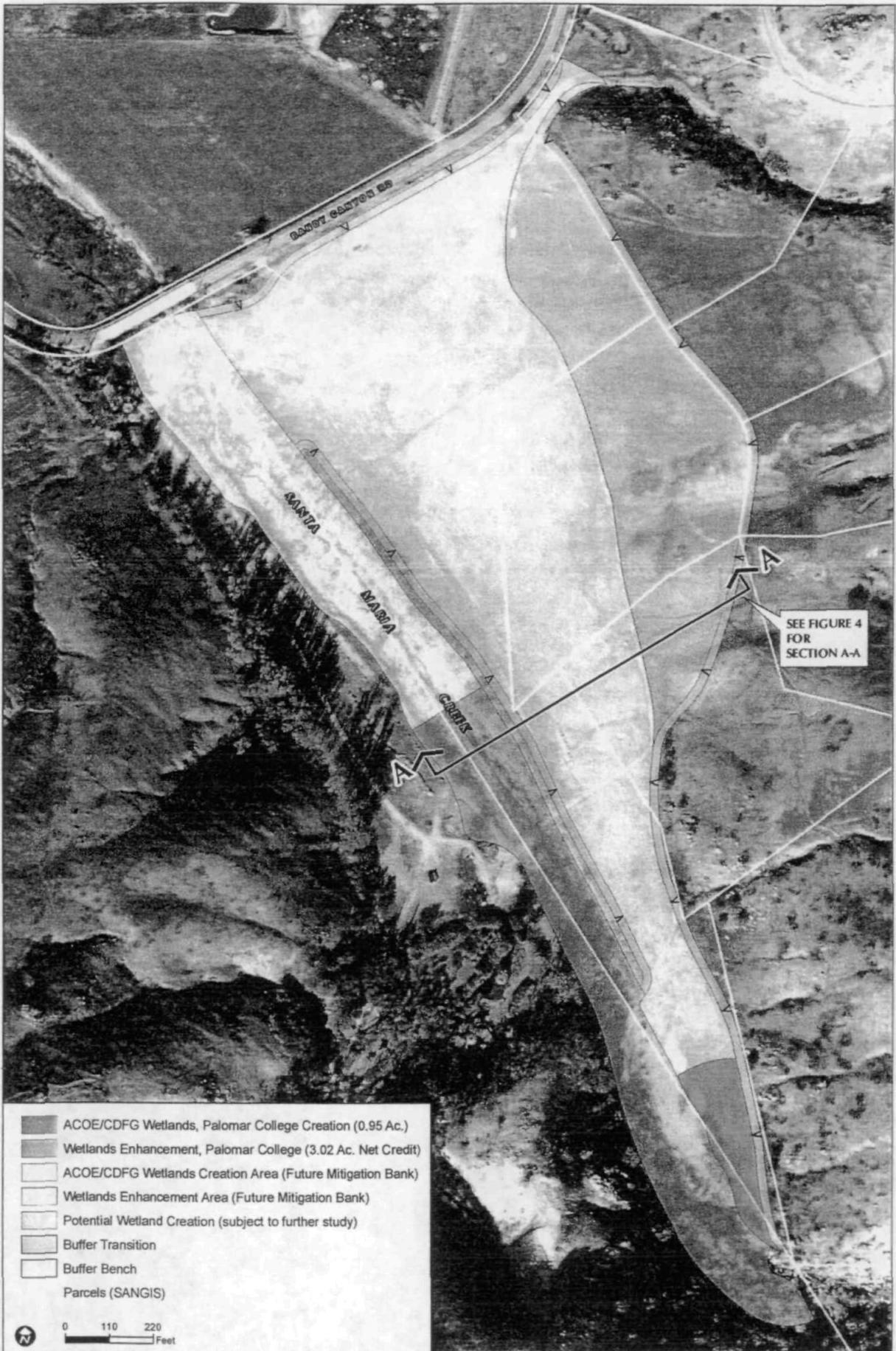


E:\ArcGIS\Projects\08\_Palomar\_College\allbrook\Map\BIO\RestorationPlan\fig4\_WetlandsMitigation.mxd -NM

# Wetland Restoration Plan

PALOMAR COLLEGE NORTH

Figure 4



- ACOE/CDFG Wetlands, Palomar College Creation (0.95 Ac.)
- Wetlands Enhancement, Palomar College (3.02 Ac. Net Credit)
- ACOE/CDFG Wetlands Creation Area (Future Mitigation Bank)
- Wetlands Enhancement Area (Future Mitigation Bank)
- Potential Wetland Creation (subject to further study)
- Buffer Transition
- Buffer Bench
- Parcels (SANGIS)

0 110 220 Feet

**DUDEK**

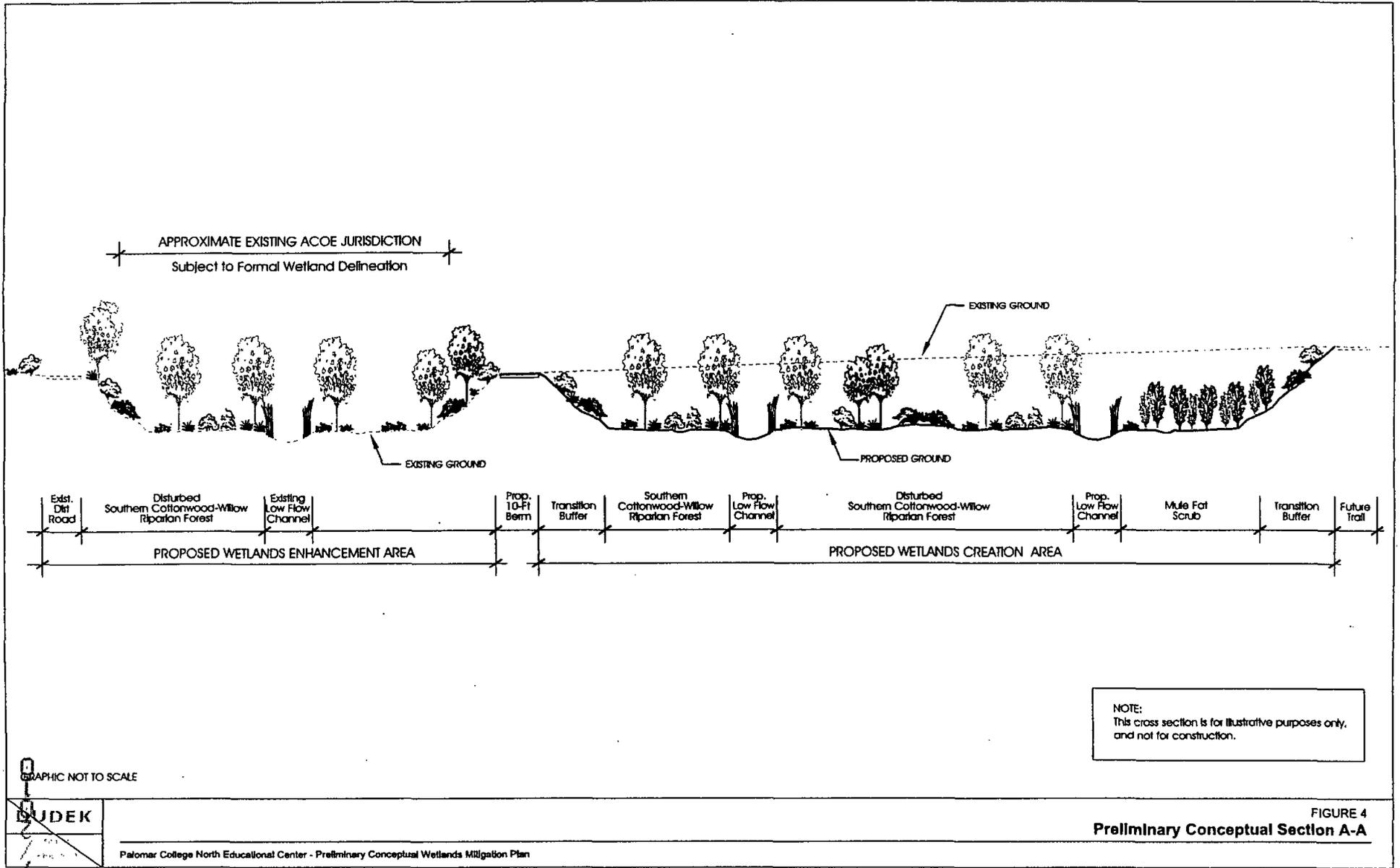
AERIAL SOURCE: DIGITALGLOBE 2008

FIGURE 3

Conceptual Wetlands Mitigation Plan at Bandy Canyon Ranch

6589-01  
APRIL 2010

Palomar College North Educational Center - Preliminary Conceptual Wetlands Mitigation Plan



NOTE:  
This cross section is for illustrative purposes only,  
and not for construction.

GRAPHIC NOT TO SCALE

**BUDEK**

Palomar College North Educational Center - Preliminary Conceptual Wetlands Mitigation Plan

**FIGURE 4**  
**Preliminary Conceptual Section A-A**

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

Amended Certification No. 10C-045

**ATTACHMENT 6**

**PHOTO DOCUMENTATION PROCEDURE**

## **Standard Operating Procedure (SOP) 4.2.1.4**

### **Photo Documentation Procedure**

(CARCD 2001, Written by TAC Visual Assessments work group)

#### **Introduction:**

Photographs provide a qualitative, and potentially semi-quantitative, record of conditions in a watershed or on a water body. Photographs can be used to document general conditions on a reach of a stream during a stream walk, pollution events or other impacts, assess resource conditions over time, or can be used to document temporal progress for restoration efforts or other projects designed to benefit water quality. Photographic technology is available to anyone and it does not require a large degree of training or expensive equipment. Photos can be used in reports, presentations, or uploaded onto a computer website or GIS program. This approach is useful in providing a visual portrait of water resources to those who may never have the opportunity to actually visit a monitoring site.

#### **Equipment:**

Use the same camera to the extent possible for each photo throughout the duration of the project. Either 35 mm color or digital color cameras are recommended, accompanied by a telephoto lens. If you must change cameras during the program, replace the original camera with a similar one comparable in terms of media (digital vs. 35 mm) and other focal length characteristics. A complete equipment list is suggested as follows:

#### Required:

- Camera and backup camera
- Folder with copies of previous photos (do not carry original photos in the field)
- Topographic and/or road map
- Aerial photos if available
- Compass
- Timepiece
- Extra film or digital disk capacity (whichever is applicable)
- Extra batteries for camera (if applicable)
- Photo-log data sheets or, alternatively, a bound notebook dedicated to the project
- Yellow photo sign form and black marker, or, alternatively, a small black board and chalk

#### Optional:

- GPS unit
- Stadia rod (for scale on landscape shots)
- Ruler (for scale on close up views of streams and vegetation)
- Steel fence posts for dedicating fixed photo points in the absence of available fixed landmarks

### **How to Access Aerial Photographs:**

Aerial Photos can be obtained from the following federal agencies:

USGS Earth Science Information Center  
507 National Center  
12201 Sunrise Valley Drive  
Reston, VA 22092  
800-USA-MAPS

USDA Consolidated Farm Service Agencies  
Aerial Photography Field Office  
222 West 2300 South  
P.O. Box 30010  
Salt Lake City, UT 84103-0010  
801-524-5856

Cartographic and Architectural Branch  
National Archives and Records Administration  
8601 Adelphi Road  
College park, MD 20740-6001  
301-713-7040

### **Roles and Duties of Team:**

The team should be comprised of a minimum of two people, and preferably three people for restoration or other water quality improvement projects, as follows:

1. *Primary Photographer*
2. Subject, target for centering the photo and providing scale
3. Person responsible for determining geographic position and holding the photo sign forms or blackboard.

One of these people is also responsible for taking field notes to describe and record photos and photo points.

### **Safety Concerns:**

Persons involved in photo monitoring should **ALWAYS** put safety first. For safety reasons, always have at least two 2 volunteers for the survey. Make sure that the area(s) you are surveying either are accessible to the public or that you have obtained permission from the landowner prior to the survey.

Some safety concerns that may be encountered during the survey include, but are not limited to:

- Inclement weather
- Flood conditions, fast flowing water, or very cold water

- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

We recommend that the volunteer coordinator or leader discuss the potential hazards with all volunteers prior to any fieldwork.

### **General Instructions:**

From the inception of any photo documentation project until it is completed, always take each photo from the same position (photo point), and at the same bearing and vertical angle at that photo point. Photo point positions should be thoroughly documented, including photographs taken of the photo point. Refer to copies of previous photos when arriving at the photo point. Try to maintain a level (horizontal) camera view unless the terrain is sloped. (If the photo can not be horizontal due to the slope, then record the angle for that photo.) When photo points are first being selected, consider the type of project (meadow or stream restoration, vegetation management for fire control, ambient or event monitoring as part of a stream walk, etc.) and refer to the guidance listed on *Suggestions for Photo Points by Type of Project*.

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

**Recording Information:**

Use a systematic method of recording information about each project, photo point, and photo. The following information should be entered on the photo-log forms (blank form included in this document) or in a dedicated notebook:

- Project or group name, and contract number (if applicable, e.g., for funded restoration projects)
- General location (stream, beach, city, etc.), and short narrative description of project's habitat type, goals, etc.
- Photographer and other team members
- Photo number
- Date
- Time (for each photograph)
- Photo point information, including:
  - Name or other unique identifier (abbreviated name and/or ID number)
  - Narrative description of location including proximity to and direction from notable landscape features like roads, fence lines, creeks, rock outcrops, large trees, buildings, previous photo points, etc. – sufficient for future photographers who have never visited the project to locate the photo point
  - Latitude, longitude, and altitude from map or GPS unit
- Magnetic compass bearing from the photo point to the subject
- Specific information about the subject of the photo
- Optional additional information: a true compass bearing (corrected for declination) from photo point to subject, time of sunrise and sunset (check newspaper or almanac), and cloud cover.

For ambient monitoring, the stream and shore walk form should be attached or referenced in the photo-log.

When monitoring the implementation of restoration, fuel reduction, or Best Management Practices (BMP) projects, include or attach to the photo-log a narrative description of observable progress in achieving the goals of the project. Provide supplementary information along with the photo, such as noticeable changes in habitat, wildlife, and water quality and quantity.

Archive all photos, along with the associated photo-log information, in a protected environment.

**The Photo Point: Establishing Position of Photographer:**

1. Have available a variety of methods for establishing position: maps, aerial photos, GPS, permanent markers and landmarks, etc. If the primary method fails (e.g., a GPS or lost marker post) then have an alternate method (map, aerial photo, copy of an original photograph of the photo-point, etc).

2. Select an existing structure or landmark (mailbox, telephone pole, benchmark, large rock, etc.), identify its latitude and longitude, and choose (and record for future use) the permanent position of the photographer relative to that landmark. Alternatively, choose the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the photographer.
3. For restoration, fuel reduction, and BMP projects, photograph the photo-points and carry copies of those photographs on subsequent field visits.

### **Determining the Compass Bearing:**

1. Select and record the permanent magnetic bearing of the photo center view. You can also record the true compass bearing (corrected for declination) but do not substitute this for the magnetic bearing. Include a prominent landmark in a set position within the view. If possible, have an assistant stand at a fixed distance from both the photographer and the center of the view, holding a stadia rod if available, within the view of the camera; preferably position the stadia rod on one established, consistent side of the view for each photo (right or left side).
2. Alternatively, use the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the focal point (photo center).
3. When performing ambient or event photo monitoring, and when a compass is not available, then refer to a map and record the approximate bearing as north, south, east or west.

### **Suggestions for Photo Points by Type of Project:**

#### **Ambient or Event Monitoring, Including Photography Associated with Narrative Visual Assessments:**

1. When first beginning an ambient monitoring program take representative long and/or medium view photos of stream reaches and segments of shoreline being monitored. Show the positions of these photos on a map, preferably on the stream/shore walk form. Subjects to be photographed include a representative view of the stream or shore condition at the beginning and ending positions of the segment being monitored, storm drain outfalls, confluence of tributaries, structures (e.g., bridges, dams, pipelines, etc.).
2. If possible, take a close view photograph of the substrate (streambed), algae, or submerged aquatic vegetation.
3. Time series: Photographs of these subjects at the same photo points should be repeated annually during the same season or month if possible.

4. Event monitoring refers to any unusual or sporadic conditions encountered during a stream or shore walk, such as trash dumps, turbidity events, oil spills, etc. Photograph and record information on your photo-log and on your Stream and Shore Walk Visual Assessment form. Report pollution events to the Regional Board. Report trash dumps to local authorities.

### **All Restoration and Fuel Reduction Projects – Time Series:**

Take photos immediately before and after construction, planting, or vegetation removal. Long term monitoring should allow for at least annual photography for a minimum of three years after the project, and thereafter at 5 years and ten years.

#### **Meadow Restoration:**

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape, long view showing an overlapping sequence of photos illustrating a long reach of stream and meadow (satellite photos, or hill close by, fly-over, etc.)
3. Long view up or down the longitudinal dimension of the creek showing riparian vegetation growth bounded on each side by grasses, sedges, or whatever that is lower in height
4. Long view of conversion of sage and other upland species back to meadow vegetation
5. Long view and medium view of streambed changes (straightened back to meandering, sediment back to gravel, etc.)
6. Medium and close views of structures, plantings, etc. intended to induce these changes

#### **Stream Restoration/stabilization:**

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape, long-view showing all or representative sections of the project (bluff, bridge, etc.)
3. Long view up or down the stream (from stream level) showing changes in the stream bank, vegetation, etc.
4. Long view and medium view of streambed changes (thalweg, gravel, meanders, etc.)
5. Medium and close views of structures, plantings, etc. intended to induce these changes.
6. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 3 and 4 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

**Vegetation Management for Fire Prevention ("fuel reduction"):**

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape, long view showing all or representative sections of the project (bluff, bridge, etc.)
3. Long view (wide angle if possible) showing the project area or areas. Preferably these long views should be from an elevated vantage point.
4. Medium view photos showing examples of vegetation changes, and plantings if included in the project. It is recommended that a person (preferably holding a stadia rod) be included in the view for scale
5. To the extent possible include medium and long view photos that include adjacent stream channels.

**Stream Sediment Load or Erosion Monitoring:**

1. Long views from bridge or other elevated position.
2. Medium views of bars and banks, with a person (preferably holding a stadia rod) in view for scale.
3. Close views of streambed with ruler or other common object in the view for scale.
4. Time series: Photograph during the dry season (low flow) once per year or after a significant flood event when streambed is visible. The flood events may be episodic in the south and seasonal in the north.
5. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 1 and 2 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.



**PHOTO SIGN FORM:** Print this form on yellow paper. Complete the following information for each photograph. Include in the photographic view so that it will be legible in the finished photo.

Location:

Subject Description:

Date:

Time:

**SENDER: COMPLETE THIS SECTION** **COMPLETE THIS SECTION ON DELIVERY**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

A. Signature  Agent  
 Addressee  
**X**

B. Received by (Printed Name) C. Date of Delivery

1. Article Addressed to:

*Kelley Hudson - MacIsaac  
 Palomar Community College District  
 1140 W. Mission Rd  
 San Marcos, CA  
 92069*

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type

Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

2. Article Number 7010 1060 0000 4952 7112  
 (Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt *M. Porter* 102595-02-M-154

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE.

**CERTIFIED MAIL™**



7010 1060 0000 4952 7112

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$	Postmark Here
Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
<b>Total Postage &amp; Fees</b>	<b>\$7.00</b>	

Sent to *Kelley Hudson - MacIsaac*  
*Palomar Community College District*  
 Street, Apt. No. \_\_\_\_\_  
 or PO Box No. *1140 W. Mission Rd*  
 City, State, ZIP+4 *San Marcos CA 92069*

PS Form 3800, August 2006 See Reverse for Instructions